

FIRE MISSION PROCESSING (MANUAL)



PLATOON FDC ORGANIZATION

FIRE DIRECTION OFFICER (FDO)

CHIEF COMPUTER

COMPUTER

HORIZONTAL CONTROL OPERATOR (HCO)

VERTICAL CONTROL OPERATOR (VCO)

RADIO/TELEPHONE OPERATOR (RATELO)

DUTIES



COMPUTER

- 1. COMBINES DATA PROVIDED BY OTHER PERSONNEL, COMPUTES FIRING DATA, AND SENDS FIRE COMMANDS TO FIRING PLT.
- 2. RECORDS CALLS FOR FIRE, FIRE ORDER, AND FIRING DATA CORRECTIONS.
- 3. MAINTAINS ALL RECORDS.
- 4. COMPUTES CALIBRATED MUZZLE VELOCITIES.
- 5. DETERMINES AND APPLIES THE GFT SETTING



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OF THE

RATELO

- 1. OPERATES FM RADIO OR TELEPHONE IN THE FDC.
- 2. DETERMINES AND TRANSMITS MESSAGE TO OBSERVER.
- 3. ENCODES AND DECODES MESSAGES, TGT LIST, AND FIRE PLANS AS REQUIRED.
- 4. ENSURES PROPER AUTHENTICATION OF ALL FIRE REQUESTS.

GUNNERY DEPARTMENT CALL FOR FIRE FDO **CHIEF FIRE COMPUTER** ORDER FO RG **MTO** DF **RTO** S COMPUTER HCO **FIRE** COMMANDS VCO GD10FM-5



THE CFF HAS 6 ELEMENTS

- 1. OBSERVER IDENTIFICATION
- 2. WARNING ORDER
- 3. TARGET LOCATION
- 4. TARGET DESCRIPTION
- 5. METHOD OF ENGAGEMENT
- 6. METHOD OF FIRE AND CONTROL

GUNNERY DEPARTMENT DISTRIBUTION PATTERN OF BURSTS ON TARGET

DISTRIBUTION IS DIRECTLY RELATED TO HOW THE PLATOON HAS BEEN POSITIONED UPON OCCUPATION OF A POSITION. HOWITZERS ARE POSITIONED IN WHAT IS CALLED FORMATIONS.

TYPES OF FORMATIONS

- 1. LINE
- 2. LAZY W
- 3. DIAMOND
- 4. STAR
- 5. TERRAIN GUN POSITIONING



FORMATIONS

LINE FORMATION

- 1. THE ADVANTAGES OF A LINE FORMATION:
 - A. EASY TO EMPLACE.
 - B. FOR EMERGENCY MISSIONS (HIP SHOOTS).
- 2. THE DISADVANTAGES ARE:
 - A. VULNERABLE TO ENEMY AIR ATTACK.
 - **B. FLANK GROUND ATTACK.**

GUNNERY DEPARTMENT FORMATIONS DIAMOND



- 1. THE ADVANTAGES OF DIAMOND FORMATIONS:
 - A. PROVIDE EXCELLENT 6400m COVERAGE.
 - B. POSITION DEFENSE AGAINST ATTACKS BY ENEMY GROUND, GUERRILA, AND SPECIAL FORCES IS GREATLY ENHANCED.
- 2. THE DISADVANTAGES ARE:

PRONE TO ENEMY AIR ATTACKS
TO INCLUDE ENEMY STRAFFING AND
BOMBING



FORMATIONS

LAZY W

- 1. THE ADVANTAGES OF THE LAZY W FORMATION ARE:
 - A. EASY TO EMPLACE.
 - **B. PROVIDES GOOD SHEAF.**
- 2. THE DISADVANTAGES ARE:

VULNERABLE TO ENEMY AIR ATTACK.



K10 THIS IS H36, ADJUST FIRE, OVER.

GRID 452 390, OVER.

INFANTRY SQUAD IN THE OPEN, OVER.

EXAMPLES



D45 de P34 AF(k)

GRID 235758 (k)

P.O.L. WP I/E(k)

H23 de N34 AF(k)

GRID 340685 (k)

SAG. ICM. I/E (k)

D32 de H86 AF SH. KNPT PT. 1 (k) DIR 4320, L340, +400, D55(k) A.S.P. WP I/E (k)

F41 de C24 AF POLAR k
DIR. 5620, DIS. 2300 k
INF DUG/IN V.T. I/E k

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GUNNERY DEPARTMENT FDO



CONSIDERATIONS

- 1. LOCATION OF THE TARGET
- 2. NATURE OF THE TARGET
- 3. AMMUNITION AVAILABLE
- 4. UNITS AVAILABLE
- 5. COMMANDER'S GUIDANCE OR STANDING OPERATING PROCEDURES (SOP)
- 6. CALL FOR FIRE
- 7. MUNITIONS EFFECTS
- 8. AVAILABILITY OF CORRECTIONS
- 9. ENEMY TARGET ACQUISITION CAPABILITY

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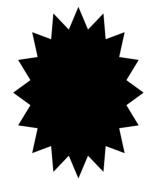
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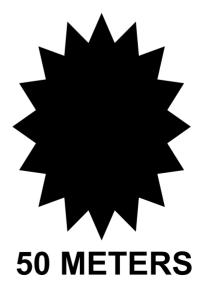
EFFECTIVE BURST WIDTHS HE PROJECTILES

105 mm



35 METERS

155 mm

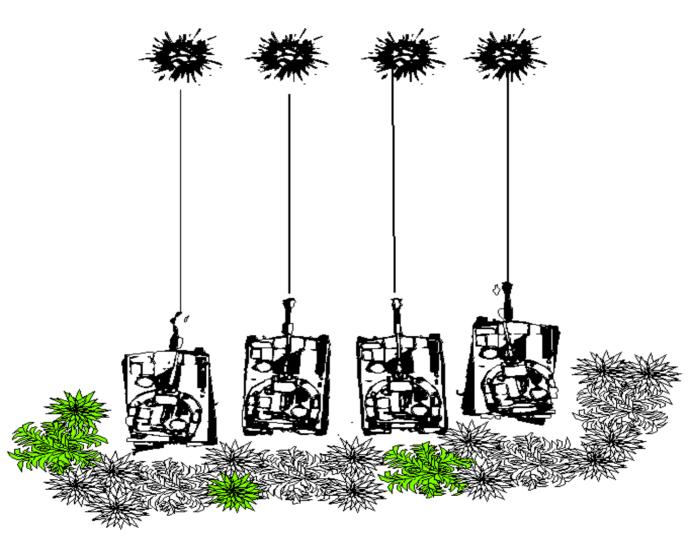


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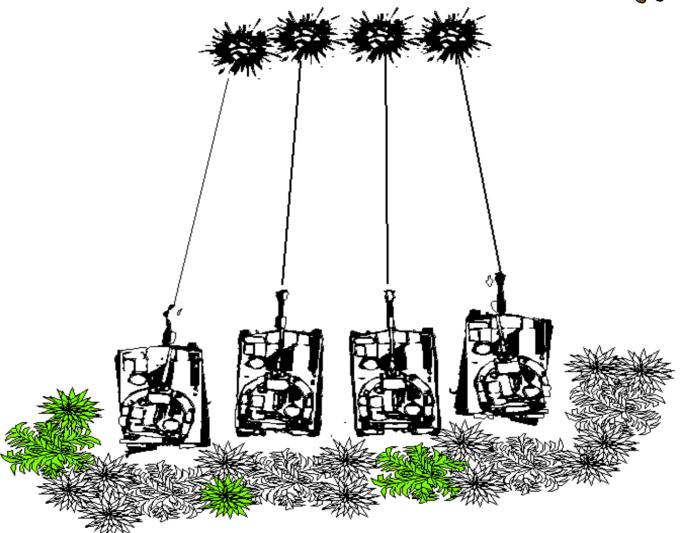
GUNNERY DEPARTMENT - PARALLEL SHEAF





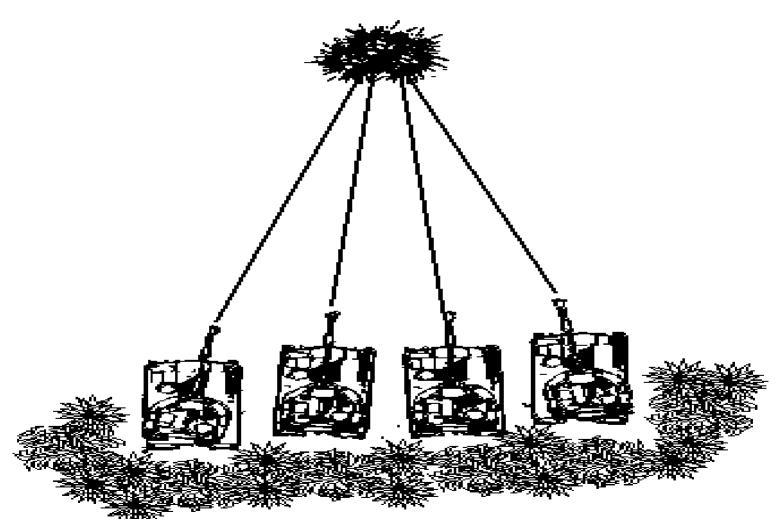
GUNNERY DEPARTMENT OPEN SHEAF





GUNNERY DEPARTMENT = CONVERGED SHEAF





GUNNERY DEPARTMENT SPECIAL INSTRUCTIONS



WHEN READY (WR)*

AT MY COMMAND (AMC)

BY ROUND AT MY COMMAND (BRAMC)

BY PIECE AT MY COMMAND (BPAMC)

BY PIECE BY ROUND AT MY COMMAND (BPBRAMC)

TIME ON TARGET (TOT)

RIGHT (OR LEFT) PIECE AT (INTERVAL)

AZMUTH

DO NOT LOAD (DNL)

CANCEL DO NOT LOAD (CDNL)

CANCEL TERRAIN GUN POSITION CORRECTIONS

(CTGPC)

PRIMARY, LEFT, RIGHT SECTOR

HIGH ANGLE (HA)

SWEEP AND/OR ZONE

USE GUNNER'S QUADRANT (UGQ)

* IF NONE GIVEN THEN W / R IS UNDERSTOOD

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OTHER FIRE COMMANDS

- 1. SPECIAL METHODS OF FIRE
 - a. CONTINUOUS FIRE
 - b. FIRE AT WILL
- 2. CHECK FIRING
- 3. CANCEL CHECK FIRING
- 4. CEASE LOADING
- 5. END OF MISSION
- 6. PLANNED OR PRIORITY TARGETS

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REPETITION OF FIRE COMMANDS

WHEN THE COMMAND WAS NOT HEARD OR NOT UNDERSTOOD, THE REQUEST FOR REPETITION IS STATED AS A QUESTION:

(MISSED COMMAND) NUMBER (GUN #)
DEFLECTION NUMBER 4?

WHEN FDC REPEATS THE COMMAND FOR A GUN IT IS ALWAYS PRECEDED BY:

NUMBER (GUN#), THE COMMAND WAS....E/G. #4 THE COMMAND WAS DF: 3200

USAFAC



CORRECTION OF COMMANDS

IF THE COMMAND OF "QUADRANT" HAS NOT BEEN GIVEN, FDC SIMPLY COMMANDS CORRECTION, FOLLOWED BY THE CORRECT COMMAND AND ALL SUBSEQUENT COMMANDS.

IF "QUADRANT" HAS ALREADY BEEN GIVEN, CHECK FIRING IS ANNOUNCED. THE COMMAND QUADRANT GIVES PERMISSION TO LOAD AND FIRE UNLESS RESTRICTED. CANCEL CHECK FIRING FOLLOWED BY THE CORRECT COMMAND AND ALL SUBSEQUENT COMMANDS MAY NOW BE ANNOUNCED.



FIRING REPORTS

- 1. LAID, NUMBER (so and so).
- 2. READY, NUMBER (so and so).
- 3. SHOT NUMBER (so and so).
- 4. ROUNDS COMPLETE (so and so).
- 5. MISFIRE NUMBER (so and so).



RECORD OF FIRE

Observer _				CALL FOR FIRM			_Tgt												F				
Grid:				_														ı	Æ				
Polar: Dir _			Die		_up		v	<u> </u>			+							ı	20/R				
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INITIAL FIRE COMMANDS BY MF							Rg						Chi Df										
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